

Amendments to the Claims

Please amend the claims as shown below in the complete listing of claims.

1. (Cancelled)
2. (Currently Amended) The system of claim 10 wherein the central data store has a computer processor that is programmed to make selective data ~~in the data storage medium~~ available to one or more remote users under predetermined conditions.
3. (Currently Amended) The system of claim 2 wherein the data store computer processor is further programmed to retrieve data ~~upon requests~~ from one or more well monitors upon request.
4. (Currently Amended) The system of claim 32 wherein the data store ~~has a~~ computer processor ~~that~~ is programmed to retrieve data from one or more well monitors upon request from the one or more remote users under certain conditions.
5. (Cancelled)
6. (Currently Amended) The system of claim 10 wherein each of the well monitors is programmed to transmit data over radio waves in a 900 MHz frequency band.
7. (Currently Amended) The system of claim 10 wherein each of the well monitors has an ~~the~~ integrated communications and control unit that comprises a radio module and a central processing unit that run solely on transistor-transistor logic (TTL) level voltages.
8. (Currently Amended) The system of claim 10 and further comprising a recorder controller adapted to convert a voltage representative of the oxygen content in a gas line into a signal representative of the oxygen content in the gas line, a transmitter connected to the recorder controller for transmitting the signal representative of the oxygen content of the gas line

to the central data store through a wireless signal that hops along ~~a~~ the predefined path that includes at least two of the well monitors and the data collection and transmission processor.

9. (Currently Amended) The system of claim 10 wherein the data store has a computer processor ~~is further that is~~ programmed to retrieve data from one or more well monitors upon request from the one or more remote users under certain conditions.

10. (Currently Amended) A system for collecting and storing well data at from geographically spaced wells comprising:

~~The system of claim 1 wherein the~~ central store adapted to receive and store data from a distant source and further comprises a computer processor that is programmed to encode data packets to and from the well monitors with an address unique to each of the well monitors and with a predefined communication path;

a plurality of well monitors, each of which is adapted to be associated with a gas or oil well and each of which is programmed to record oil or gas well production data at a given oil or gas well location, each of the well monitors further having a transceiver for transmitting a wireless signal representative of the recorded oil or gas production data of the respective well with which it is associated, the well monitors are further programmed to receive wireless signals representative of data from other of said well monitors and transmit the received data to other of said well monitors and to a data transmission processor and each of the well monitors is programmed to pass on to another well monitor data packets that it receives and that have an address different than the address of the respective well monitor;

the data transmission processor is adapted to be placed in a field location geographically spaced from the oil or gas wells that have at least one of said well monitors associated therewith, the data transmission processor has a receiver that is adapted to receive wireless data signals transmitted from at least one of the well monitors, has a converter to convert the received wireless data from the at least one well monitor to a communication signal

and has a transmission connection to send the converted communication signal from the field location to the central data store;

whereby oil or gas well production data can be transmitted to the central data store by hopping from well monitor to well monitor along the predefined path to the data transmission processor which can then, in turn, transmit the oil or gas well production data to the central store for storage and analysis.

11. (Cancelled)

12. (Currently Amended) The method of claim ~~11~~³³ and further comprising ~~the step of~~ sending a response data packet from the destination well ~~unit~~monitor to the field station along the predefined path but in the opposite direction.

13. (Currently Amended) The method of claim 12 ~~and further comprising wherein the~~ response data packet is sent from the destination well monitor to the field station by the step of hopping the response packet via radio waves from the destination ~~unit~~well monitor along the ~~preseries of at least two defined path well units if the first well unit is not the destination well unit~~ until the destination packet reaches the field station.

14. (Currently Amended) The method of claim 13 and further comprising the step of sending the response data packet from the field station to the central data store.

15. (Currently Amended) The method of claim 14 wherein the step of sending the response data packet from the field station to the central data store is via the Internet.

16. (Currently Amended) The method of claim ~~33~~¹¹ wherein the ~~step act of sending the data request packet~~ from a the central data store to a the field station a request data packet is via the ~~Internet~~.

17. (Currently Amended) The method of claim ~~33~~11 wherein there are a plurality of geographically spaced wells, each with a ~~units~~ monitor that has a unique address and ~~the step of sending the data request packet is sent from a~~the central data store to ~~a~~the field station ~~a request data packet is sent and to each of the monitors~~the plurality of well units.

18. (Currently Amended) The method of claim 17 and further comprising ~~the step of transmitting a request~~ing from a remote user to the central data store for a data packet ~~from~~of the first destination well unit ~~monitor~~from the central data store from a remote user; and the ~~step~~act of sending the data request packet from a central data store to a field station ~~a request data packet that is responsive to the request from the remote user.~~

19. (Cancelled)

20. (Currently Amended) A method for gathering operating data from a plurality of geographically spaced oil or gas producing wells according to claim ~~19~~31 wherein the transmitting ~~step~~ act further includes transmitting the data between the well hopping path and the central data storage zone through the ~~I~~Internet.

21. (Currently Amended) A method for gathering operating data from a plurality of geographically spaced oil or gas producing wells according to claims ~~19~~31 and further comprising ~~the step of~~ correlating the transmitted data according to the geographically spaced wells at the central data storage zone.

22. (Currently Amended) A method for gathering operating data from a plurality of geographically spaced oil or gas producing wells according to claim ~~31~~19 and further comprising ~~the step of~~ accessing selected portions of the stored data in the central data storage zone from a site remote therefrom.

23. (Currently Amended) A method for gathering operating data from a plurality of geographically spaced oil or gas producing wells according to claim ~~31~~19 and further comprising

~~the step of~~ polling the least one well prior to the gathering ~~step~~act and the gathering ~~step~~act is responsive to the polling step.

24. (Original) A method for gathering operating data from a plurality of geographically spaced oil or gas producing wells according to claim 23 wherein the polling ~~step~~act is initiated from a site remote from the central data storage zone.

25. (Currently Amended) A method for gathering operating data from a plurality of geographically spaced oil or gas producing wells according to claim ~~19~~31 and further comprising ~~the step of~~ polling all of the wells and the gathering ~~step~~act includes gathering well production data from each of the polled wells.

26. (Currently Amended) A method for gathering operating data from a plurality of geographically spaced oil or gas producing wells according to claim 25 wherein the gathering ~~step~~act is responsive to the polling ~~step~~act.

27. (Currently Amended) A method for gathering operating data from a plurality of geographically spaced oil or gas producing wells according to claim 25 wherein the polling ~~step~~act includes transmission of data requests to each of the wells along the ~~data transmission at least one hopping path~~ but in the opposite direction.

28. (Currently Amended) A method for gathering operating data from a plurality of geographically spaced oil or gas producing wells according to claim ~~19~~31 wherein the wireless transmission of well production data ~~well hopping step~~ takes place between wells that are geographically spaced from each other a distance of no more than 1 mile.

29. (Cancelled)

30. (Currently Amended) A method for gathering operating data from a plurality of geographically spaced oil or gas producing wells according to claim ~~31~~29 wherein the wireless transmission is carried out by radio waves that are in the 900 MHz frequency band.

31. (Currently Amended) A method for gathering operating data from a plurality of geographically spaced oil or gas producing wells comprising:

gathering well production data relating to at least one of the geographically spaced oil or gas producing wells;

transmitting the gathered well production data to a central data storage zone;

storing at least some of the transmitted data in the central storage zone; and

~~according to claim 19 and further comprising the step of~~ assigning to each of the wells a unique address, and assigning to each well at least one well hopping path between each well and the central data store zone;

wherein the transmission of the well production data includes wireless transmission of well production data from the at least one of the geographically spaced oil or gas production wells along the at least one well hopping path that includes the at least one well and at least one other of said geographically spaced wells.

32. (Currently Amended) A method for gathering operating data from a plurality of geographically spaced oil or gas producing wells according to claim ~~19~~³¹ and further comprising ~~the step of~~ detecting the level of oxygen in a production gas stream from one or more of the wells; wherein the gathering step includes gathering data related to the detected level of oxygen in ~~a~~ the production gas stream from one or more of the wells.

33. (New) A method for communicating between geographically spaced wells and a central data store at a remote location with respect to the geographically spaced wells, comprising:

encoding a data request packet with an address unique to a destination well monitor at a destination well and with a predefined path that includes a well monitor at each of at least two geographically spaced wells;

sending the encoded data request packet from the central data store to a field station;

transferring the encoded data request packet from the field station to a first well monitor at a first well in the predefined path via radio waves;

determining if the first well monitor is the destination well monitor; and

if the first well monitor is not the destination well monitor, hopping the request data packet along the predefined path via radio waves until the request data packet reaches the destination well monitor.

34. (New) A system for collecting and storing well data from a plurality of geographically spaced oil or gas wells comprising:

a central data store positioned at a remote location from the plurality of geographically spaced wells and adapted to receive and store data from a distant source through a predefined communication path, the central store further has a computer processor that is programmed to encode data packets to and from the well monitors with an address unique to each of the well monitors and with a predefined path;

each of the plurality of geographically spaced wells has associated therewith a well monitor, each of the well monitors is programmed to record oil or gas well production data at its associated oil or gas well location, each of the well monitors further has a transceiver for transmitting a wireless signal representative of the recorded oil or gas production data of the respective well that it is associated with, the well monitors are further programmed to receive wireless data packets from other of said well monitors and, if it is in the predefined path, transmit to other of said well monitors and to a data transmission processor the received data packets that have a destination address different than the address of the respective well monitor;

the data transmission processor is positioned in a field location geographically remote from the central data store and in the geographic region containing the plurality of geographically spaced wells within range to receive a wireless signal from at least one of the plurality of geographically spaced wells that have one of said well monitors associated therewith, the data transmission processor has a receiver that is adapted to receive wireless data signals transmitted from the at least one of the well monitors, has a converter to convert the received

wireless data from the at least one well monitor to a communication signal and has a transmission connection to send the converted communication signal from the field location to the central data store;

whereby oil or gas well production data can be transmitted to the central data store by hopping from well monitor to well monitor along a predefined path to the data collection and transmission processor which can then, in turn, transmit the oil or gas well production data to the central store for storage and analysis.

35. (New) The system of claim 34 wherein the central data store has a computer processor that is programmed to make selective data available to one or more remote users under predetermined conditions.

36. (New) The system of claim 35 wherein the data store computer processor is further programmed to retrieve data from one or more well monitors upon request.

37. (New) The system of claim 35 wherein the data store computer processor is programmed to retrieve data from one or more well monitors upon request from the one or more remote users under certain predetermined conditions.

38. (New) The system of claim 34 wherein each of the well monitors is programmed to transmit data over radio waves in a 900 MHz frequency band.

39. (New) The system of claim 34 wherein each of the well monitors has an integrated communications and control unit that comprises a radio module and a central processing unit that run solely on transistor-transistor logic (TTL) level voltages.

40. (New) The system of claim 34 and further comprising a recorder controller adapted to convert a voltage representative of the oxygen content in a gas transmission line into a signal representative of the oxygen content in the gas transmission line, a transmitter connected to the recorder controller for transmitting the signal representative of the oxygen content of the gas in the gas transmission line to the central data store through a wireless signal that hops along

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the predefined path that includes at least two of the well monitors and the data collection and transmission processor.

41. (New) The system of claim 34 wherein the central data store has a computer processor that is programmed to retrieve data from one or more well monitors upon request from the one or more remote users under certain conditions.